

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method, comprising:

determining a packet to be transmitted via a port;

determining information associated with the port; and

preventing the packet from being placed in a transmit buffer based on the determined information, wherein the single transmit buffer stores packets associated with a plurality of ports.
2. (Original) The method of claim 1, wherein the transmit buffer is a first-in, first-out buffer.
3. (Original) The method of claim 1, wherein the determinations are performed by a transmit processing element, and the transmit buffer is stored in a memory unit external to the transmit processing element.
4. (Original) The method of claim 3, wherein the information associated with the port is a port status indicating that the port is currently blocked.
5. (Original) The method of claim 3, wherein the determination of information associated with the port comprises:

accessing a control status register and evaluating a bit associated with the port.

6. (Original) The method of claim 5, wherein the determination of information associated with the port comprises detecting that another packet to have been transmitted via the port was removed from the transmit buffer without being successfully transmitted.

7. (Original) The method of claim 3, wherein said preventing comprises:
placing the packet in a local queue stored at the transmit processing element.

8. (Original) The method of claim 7, further comprising:
determining that a port status indicates that the port is not currently blocked; and
arranging for the packet to be moved from the local queue to the transmit buffer.

9. (Original) The method of claim 7, wherein determination of the packet to be transmitted comprises receiving the packet from a schedule processing element.

10. (Original) The method of claim 1, wherein the determinations are performed by a schedule processing element.

11. (Original) The method of claim 10, wherein the determination of information associated with the port comprises:

receiving an indication of a number of packets that have been transmitted;
calculating a number of packets that are pending; and
comparing the number of packets that are pending with a pre-determined threshold value.

12. (Original) The method of claim 10, wherein said preventing comprises:

not scheduling the packet to be transmitted.

13. (Original) The method of claim 12, further comprising:

determining that a number of packets that are pending is below a pre-determined threshold value; and

scheduling the packet to be transmitted.

14. (Original) The method of claim 13, wherein the scheduling includes:

providing the packet to a transmit processing element.

15. (Currently Amended) An article, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

determining a packet to be transmitted via a port;

determining information associated with the port; and

preventing the packet from being placed in a transmit buffer based on the determined information, wherein the single transmit buffer stores packets associated with a plurality of ports.

16. (Original) The article of claim 15, wherein the transmit buffer is a first-in, first-out buffer.

17. (Original) The article of claim 15, wherein the determinations are performed by a transmit processing element, and the transmit buffer is stored in a memory unit external to the transmit processing element.

18. (Original) The article of claim 17, wherein the information associated with the port is a port status indicating that the port is currently blocked.

19. (Original) The article of claim 17, wherein the determination of information associated with the port comprises:

accessing a control status register and evaluating a bit associated with the port.

20. (Original) The article of claim 19, wherein the determination of information associated with the port comprises detecting that another packet to have been transmitted via the port was removed from the transmit buffer without being successfully transmitted.

21. (Original) The article of claim 17, wherein said preventing comprises:

placing the packet in a local queue stored at the transmit processing element.

22. (Original) The article of claim 17, wherein determination of the packet to be transmitted comprises receiving the packet from a schedule processing element.

23. (Original) The article of claim 15, wherein the determinations are performed by a schedule processing element.

24. (Original) The article of claim 23, wherein the determination of information associated with the port comprises:

receiving an indication of a number of packets that have been transmitted,
calculating a number of packets that are pending, and
comparing the number of packets that are pending with a pre-determined threshold value.

25. (Original) The article of claim 23, wherein said preventing comprises:
not scheduling the packet to be transmitted.

26-28. (Canceled)

29. (Currently Amended) An apparatus, comprising:
a schedule processing element to provide packets to be transmitted via a plurality of ports;

a transmit processing element to receive the packets; and

a memory external to the transmit processing element to store the packets in a single transmit buffer,

wherein the schedule processing element prevents a packet from being provided to the transmit processing element when a number of packets that are pending exceeds a pre-determined threshold value.

30. (Currently Amended) The apparatus of claim 29, wherein the schedule processing element is to receive from the transmit processing element an indication of a number of packets that have been transmitted and the determination of whether the port is currently block is based on: (i) the received indication, (ii) a number of packets that [[that]] have been scheduled, and (iii) the pre-determined threshold value.

31. (Currently Amended) A system, comprising:

a network processor, including:

a transmit processing element to provide packets to be transmitted via a plurality of ports,
and

a memory external to the transmit processing element to store the packets in a single transmit buffer,

wherein the transmit processing element includes a local queue to store packets to be transmitted via a port that is currently blocked; and

an asynchronous transfer mode fabric interface device coupled to the network processor.

32. (Original) The system of claim 31, wherein the transmit processing element determines that a port is currently blocked by accessing a control status register and evaluating a bit associated with the port.

33. (Original) The system of claim 31, wherein the network processor further includes:

a schedule processing element to provide the packets to the transmit processing element, wherein the schedule processing element prevents a packet from being provided to the transmit processing element when a number of packets that are pending exceeds a pre-determined threshold value.

34. (New) A method, comprising:

determining, at a transmit processing element, a packet to be transmitted via a port;

determining, at the transmit processing element, port status information indicating that the port is currently blocked based on a port status vector that indicates whether or not each of a plurality of different ports is currently blocked;

placing the packet in a local queue stored at the transmit processing element;

determining, at the transmit processing element, port status information indicating that the port is no longer blocked based on a newly updated port status vector; and

moving the packet from the local queue to a first-in, first-out transmit buffer based on the newly determined port status information, wherein the transmit buffer comprises a single buffer, in a memory unit external to the transmit processing element, that stores packets associated with the plurality of different ports.